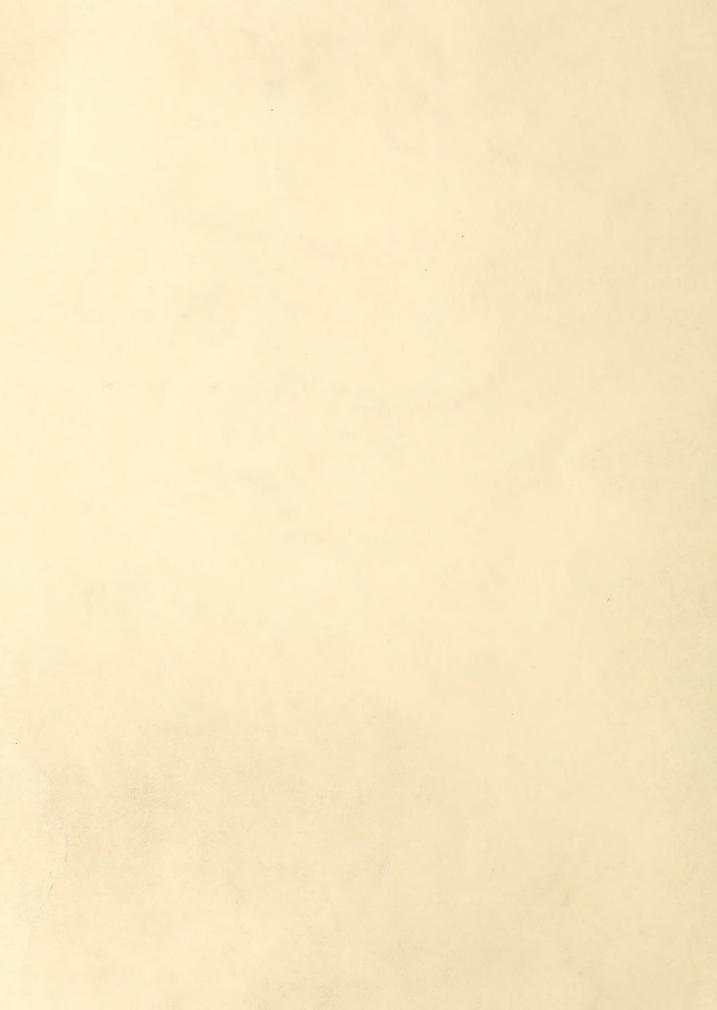
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FEDERAL-STATE COOPERATIVE SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

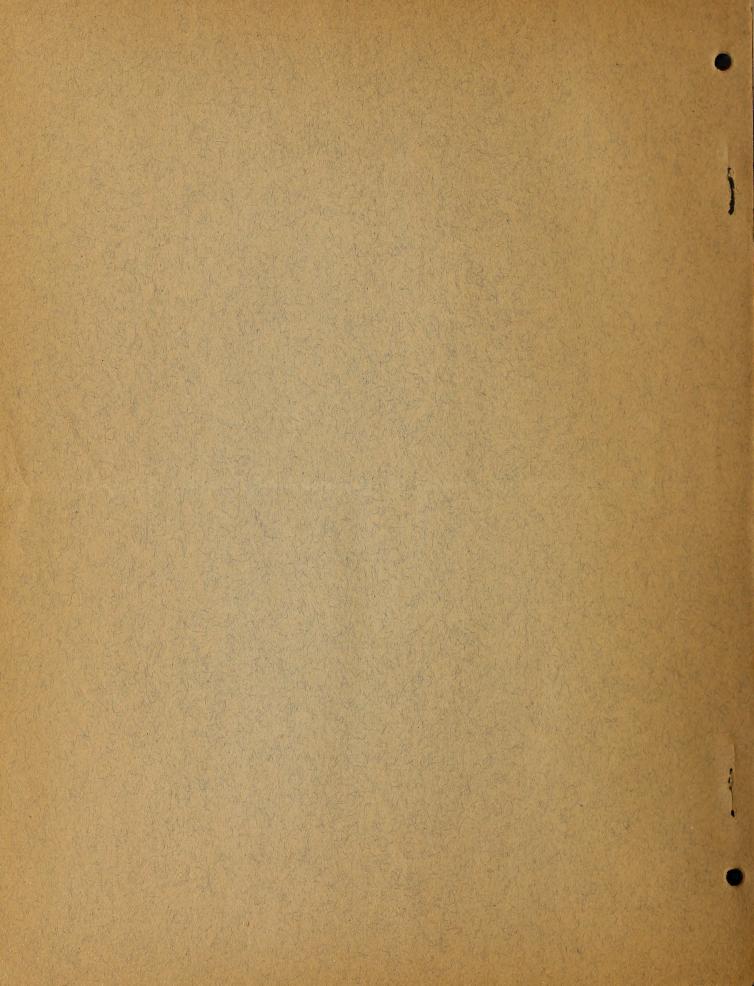
RIO GRANDE DRAINAGE BASIN

APRIL 1, 1941

By

Division of Irrigation, Soil Conservation Service
United States Department of Agriculture
and
Colorado Agricultural Experiment Station

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, National Park Service, State Engineers of Colorado and New Mexico and other Federal, State and local organizations.



for

RIO GRANDE BASIN

April 1, 1941

wise conducted cooperatively with the State Engineers of Colorado and New Mexico, Colorado Agricultural Experiprincipally by field personnel of the U. S. Forest Service and Colorado State Engineer. This work is otherthe Division of Irrigation, Soil Conservation Service of the U.S. Department of Agriculture, in cooperation ment Station, and various municipalities, irrigation associations and others. Precipitation records are The following data pertaining to snow surveys and irrigation water-supply forecasts are provided by with other Federal Bureaus, State Departments, and local organizations. The snow measurements are made supplied by the U. S. Weather Bureau.

PRECIPITATION DATA

		Precipitation	Departure	Precipitation	Departure
WATERSHED	STATE	October 1 to	from		from
		March 31	Normal	March	Normal
		Inches	Inches	Inches	Inches
Canadian	New Mexico	86.9	12.97	2.79	+1.99
Rio Grande	Colorado	12,08	+3.74	3.60	+1.61
Rio Grande	New Mexico	11,17	+4.65	2.87	+1.61
Pecos	New Mexico	7.09	+2.74	2.78	+1.96

Above normal precipitation occurred during March over the watershed of the Pecos and Canadian Rivers in New Mexico and the Rio Grande in Colorado and New Mexico. The accumulated precipitation since October 1 is about twice what it was last year at this time.

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SUMMARY OF APRIL 1 SNOW SURVEYS AND COMPARISON OF DATA WITH THAT OF PREVIOUS YEARS BY WATERSHEDS

							Number				1941 Water	1941 Water Content in
	Sn	Snow Depth	th	Wate	Water Content	ent	Courses	Snow	Snow Density		percent of	of
WATERSHEDS	Five			Five			in	Five			Five	
	year	1940 1941		Year		1940 1941	Average	Year	1940	1941	year	1940
	AVE.*			Avg.*				Avg.*			Avg.*	
	In.	In.		In.		In.		Percent	Percent	Percent		
Rio Grande	27.7	12.4		9.5	5.0	16.1	22	34	유	34	169	322
Canadian River		4.8	14.6 4.8 33.4	₩.8 1	1.8	11.6	N	33	38 3	35	242	949
*Some for shorter nemions	ter ner	i ode										

WATER SUPPLY OUTLOOK

rapid melting of the snow occurs due to above-normal temperatures, high stages of the river will probably occur this time, but the reservoirs in New Mexico on the Rio Grande and Chama have 26 percent less water in storage. times what it was last year and 69 percent more than the five-year average. It is expected that the run-off in some sections. Reservoirs in the San Luis Valley have 16 percent more water in storage than last year at New Mexico on April 1 was 16.1 inches as shown by measurements on 22 snow courses. This is more than three will be considerably in excess of last year and will also be above the average for the last five years. If The average water content of the snow on the watershed of the Rio Grande in Colorado and Soil moisture is good to Spring run-off is expected to add materially to the storage in the reservoirs. excellent in the Rio Grande valley in both Colorado and New Mexico.

inches which is 62 times what it was last year and nearly 23 times the five-year average. Conditions on this Storage in Conchas Reservoir is 30 percent greater than it was last year at this time. CANADIAN. The average water content of the snow on the two courses on the Canadian watershed was 11.6 watershed are favorable for heavy run-off which will probably be considerably in excess of the average for Soil moisture is excellent. the last five years.

The water supply outlook in all parts of New Mexico is the best that it has been in recent years.

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RIO GRANDE WATERSHED

Summary of Federal and State Cooperative Snow Surveys Issued April 10, 1941, at Fort Collins, Colorado

-			3004	to Co to to to to the	CO TOTO OOT	CTTTT	onto ano			-				
	Main Drainage	Local		Location		Elev.	National	Apr.	1 Snow	M Course		Measurement	ents	
	and	Drainage	State	Locality	Descrip-		Forest	Av. S	Dow D	Snow Depth Av. Water	v. Wat	er Cor	Content	
No	No. Snow Course)			ti on				1940	1941 A	AVE.	1940	1941	
	RIO GRANDE	-							In.	In. I	In.	In.	In.	
56	Wolf Creek Pass	South Fork	Colo.	Wolf Cr.Pass	1-37N-2E	10000	Rio Grande	86.0	41.00	00106.913	70.05	15.9	37.2	
27		Rio Grande	=		13-40N-4W	9350	=======================================	9.5		-	4.5		0.0	
147	Silver Lakes	Alamosa R.	=	lmi.S.Silver L.	15-36N-5E	9600	= =	19.9			5.5	0.5	8.7	
4	River Springs	Conejos R.	=	lomi.W.Mogote	25-33N-6E	9300	=	24.5			7.	2.0	6.8	
77	LaVeta Pass#2	Sandristo Gr.	z		22-28S-70W	-	SandristoGr		15.51	5	7.9	5.5	13.0	
75	Ute Ridge	Rio Grande	=	Rio Grande Res.	31-41N-4W		Rio Grande	1	7.7	1		7.0	1	
91		Wightman Cr.	=	Summitville	30-37N-4E	11500			38.0	95.5 2	20.1	14.0	31.0	
11	-	Los Pinos R.	=	s Pass	囯	10000	=======================================	74.1	2.0	00	29.5	17.1	37.0	
80	Santa Maria	N.Clear Cr.	=	Santa Maria Res.	8-41N-2W	9700	=======================================	8.3	0.0		7.0	0.0	7.3	
82	Culebra	Culebra R.	=	12mi .E. SanLuis	37.2W105.2W		SanCristoGr	and the parties	28.2			11.6	16.6	
48	Fort Garland	Big Ute Cr.	=	6mi.N.Ft.Garland	13-29N-72W	8200	11 11 11	18.5	0.0	0		0.0	14.3	
-		Red River	N.Mex.	N.Mex. 6mi . SE. RedRiver	29-28N-15E	9500	Carson		-	8. 44	9,1	-	17.6	
a.	Taos Canyon	Rio de Taos	=	14mi .E.Taos	10-25N-15E			18.1	1		6.2	3.1	13.4	
4	Aspen Grove	Rio En Medio	=	10mi .NE. SantaFe	12-18N-10E		Santa Fe	10.1	10	7	3.3		10.3	
5	Lee Ranch	Jemez Cr.	==	5mi.NW.Bland	3-181-4至	9050	==		0	7.	2.7		24.3	
9	Canjilon	Canjilon Cr.	=	Smi.NE.Canjilon	1-26N-6E	-	Carson		4.14	80.5	24.2	-	37.9	
1	Rio Nutrias	Rib Nutrias	=	10mi .SE ParkView	6-27N-5E	7900	±2	9.6	0.0		3.6	0.0	0.6	
00	Panchuela	Panchuela Cr.	=	lmi.N.Cowles	34-19N-12E		Santa Fe	5.5	0.0	2,00	1.8	0.0	8	
0	Hematite Park*	Red River	=	3mi.SM.Red.R.	8-28N-15E		Carson	16.91	16.4		5.6	1.8	13.2	
12	Tres Ritos	Agua Piedra	=	7mi.W.Holman	23-22N-13E	9000	=	12.4	N	34.6	0.4		10.7	
15	Pay Role	Rock Creek	=	Umi.SE.Hopewell	16-28N-7E	10000	=	34.6	12.3		11.4		18.6	
16	Jicarilla	Rock Lake Cr.	=	15mi.S.Dulce	9-29N-1W	8500	Jicarilla R.	7.2	0		2.6	0.0	5.3	
17	Chama Divide	Willow Creek	=	6mi.W.Chama			Off Forest	8	0.0	0.91	3.3	0.0	9.0	
18	Chamita	Chamita Cr.	z	6mi .NW . Chama	36.9N-106.7W	8500	=					1		
	CANADIAN				Average i	for Dr	Drainage	27.7	12.4	14g • 0	9.5	5.0	16.1	
0	ark	Moreno Creek	N.Mex.	я.	8-28N-15E	9500	Carson	16.9	6.4		5.6	1.8	13.2	
10	Ocate Mesa	Ocate Creek	=	Black L.	25-24N-16E	9200 Off	E4 6	12.4	14.6	31.6	0,0	000	9.6	
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FEDERAL - STATE
COOPERATIVE SNOW SURVEY

A RATIONAL APPROACH
TO THE RESEARCH PROB-LEM OF FORECASTING FLOW
OF STREAMS NECESSARY FOR IRRIGATION, DOMESTIC AND MUNICIPAL WATER SUPPLY, HYDRO-ELECTRIC POWER GENERATION, NAVIGATION, MINING AND INDUSTRY.

A NATIONAL DEFENSE UNIT

